

Navigating the Digital Shift: Teachers and Students Experiences of Teaching and Learning During and After the COVID-19 Pandemic in Nagaland

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ABSTRACT: The COVID-19 pandemic served as a turning point for education globally, and Nagaland was no exception, particularly in places where technology in education was previously minimal. The sudden shift to online education during the pandemic was a challenge and an opportunity for both teachers and students. The study is based on empirical data drawn from both qualitative and quantitative methods, revealing the narratives and accounts of the educators and learners on their firsthand experience in teaching and learning during the pandemic. The study highlights the shift and the initial challenges in using ICT tools for education and the connectivity issues, especially in rural areas of Nagaland. Further, it reveals that learning was greatly reduced along with decreased interaction. Despite the limitations, ICT tools enabled the educators and learners to stay digitally connected through online platforms. Post-COVID-19 pandemic unfolds that online tools expanded and offered new learning opportunities for students, and it contributed to the learners being more distracted, less engaged, reduced curiosity, weakened writing skills, low academic performance and overreliance on technology. Overall, the study finds that the usage of ICT tools has opened new avenues for teaching and learning, but its overuse poses substantial challenges to sustaining students motivation and academic growth.

KEYWORDS: Technology, Education, Teaching and Learning, COVID-19 Pandemic.

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I. INTRODUCTION

The COVID-19 pandemic brought life to a halt globally, leading to the closure of schools, colleges and universities, including the shutdown of factories, industries and offices, bringing normal life to a standstill (Gaikwad, 2021). Since its occurrence in 2019, it shocked the whole world and had a significant impact on the entire network of society globally, in terms of health, military, agriculture, business, and most importantly, education. Kaur N., et al (2020) express that the sudden outbreak of the pandemic created panic and anxiety among the people and community worldwide, across all ages, young and old. Koshi, L. (2021) unfolds that the COVID-19 pandemic was a phase to look at human history, showcasing empathy, humanness and solidarity to meet the global challenges with utmost responsibility. The World Health Organization declared COVID-19 a public emergency of international concern in January 2020 and declared it a Pandemic in March 2020. As per the UNESCO report, over 166 countries implemented nationwide closures in March 2020, impacting over 87% of the world's student population, amounting to over 1.52 billion students, and nearly 60.2 million teachers were no longer in the classroom (UNESCO 2020). Viano, A. (2023) proclaims that technology has become so much a part of society that it has become a necessity. Viano further mentioned that the COVID-19 pandemic has sped up this process, enabling people to be more efficient than ever.

COVID-19 and Education: Varunan & Pradeep. M. (2024) deliberates that the traditional method of education has been surpassed by the drive to use ICT tools in higher education. The pandemic served as a turning point for education globally, and Nagaland has not been an exception, as many other places where technology in education was minimal. Thamarasseri, I, & Divya Martin (2021) proclaim that the use of technology has changed the way we see the world and that the pandemic has played a key role in adopting technology to provide holistic education, making it a more enjoyable, engaging, smooth and effortless experience.

There is no doubt that the COVID-19 pandemic has accelerated and enhanced the use of ICT tools in education, but this change was not without challenge. Onyema, E. M., et al (2020) state that the COVID-19 outbreak created an educational disruption and increased the gap in education sectors globally. Kaur, N., et al (2020) discuss that the education sector took a strong blow because of the pandemic. Further states that e-learning was one such area to combat the challenges of teaching and learning, ensuring continuity during the time of the pandemic, which was a challenging time for the education ministry.

COVID-19/ Teaching and Learning: Viano, A. (2023) deliberates that both educators and learners have become more comfortable in making use of ICT tools necessary for education, with new possibilities, without which modern teaching and learning would not be possible. Viano further mentions that freedom and flexibility seem to be the key elements attracting the educators and the learners of the present generation, facilitated by technology. Adelowotan, M. (2021) argues that with the COVID-19 pandemic, there should be a kind of rethinking about the teaching and learning resources and technologies in order to make teaching and learning more flexible. Similarly, Onyema, E. M., et al (2020) unfold that the integration of technology in education is no longer a choice but a need for educators and learners, considering the growth and development in the teaching and learning environment and the demand for flexibility.

II. METHODOLOGY

The research was conducted in Nagaland, situated in the northeastern part of India. The State is known for its rich cultural heritage and predominantly tribal state, and is protected under Article 371 (A) of the Indian Constitution to safeguard the culture, tradition and the way of life of the Nagas. In terms of geography, Nagaland is a hilly State sharing its boundaries with Assam on the west, Myanmar on the east, Arunachal Pradesh on the north and Manipur on the south. This study is grounded in an empirical approach and employs both qualitative and quantitative methods to capture the multifaceted impact of the COVID-19 pandemic on higher education in Nagaland. Data were collected from both primary and secondary sources. Primary data collection tools included structured interviews and questionnaires, enabling an in-depth understanding of teaching and learning experiences during the pandemic. To ensure representativeness, stratified random sampling was employed, categorising respondents into administrators, teachers, and students across four districts of Nagaland. A total of nine higher education institutions were selected for the study—six colleges and three universities, spread across Kohima, Peren, Mon, and Chumoukedima districts. These institutions were chosen as they underwent similar restrictions as other higher education institutions worldwide, including complete or partial campus closures and government-imposed bans on in-person classes. This sudden disruption amplified the reliance on digital technologies for teaching and learning, compelling both teachers and students to adapt to new routines and navigate unprecedented challenges. By including institutions from diverse districts, the study captures variations in digital access and educational experiences while reflecting the broader realities faced by higher education in Nagaland during the pandemic.

III. COVID-19 AND ITS IMPACT

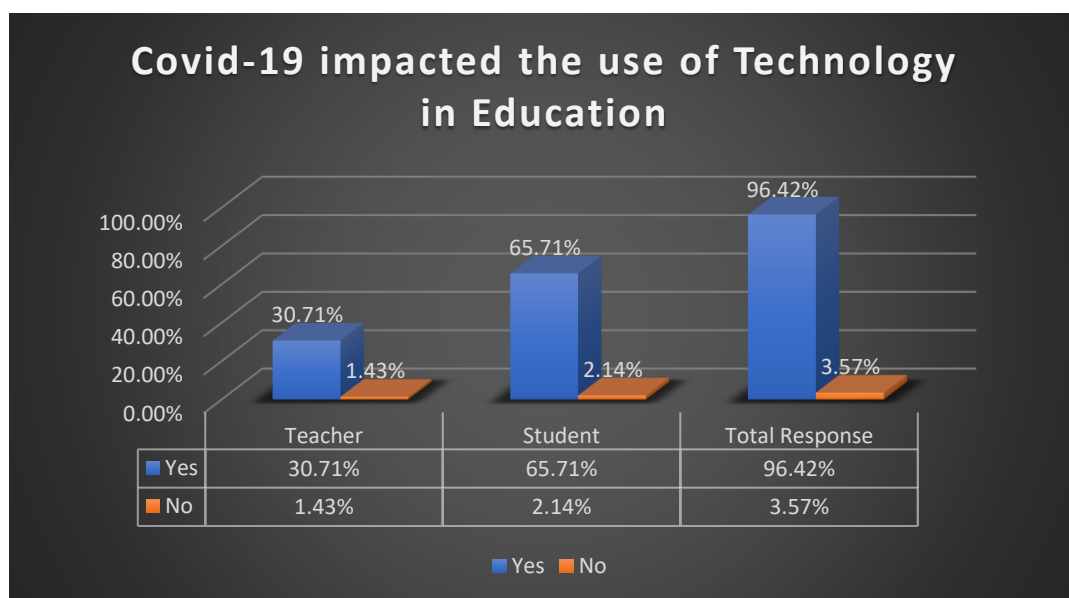


Table 1: Impact of COVID-19 on Respondents Use of Technology in Education

Source: Field Data

According to Table 1, the data reveal that the majority of the respondents, with a total of 94.42%, agreed that the COVID-19 pandemic has greatly impacted the use and adoption of ICT tools in education, and a minimum percentage of 3.57% disagreed with the statement. The data here highlights that there has been a universal experience of change in education with the adoption of technology.

Gulvani, S. (2022) observe that the COVID-19 pandemic has brought about the largest disruption in the history of education, impacting the entire global educators and learners' community. Gulvani further states that the pandemic has steered education towards technological innovation and advancement. In the context of Nagaland, the study data clearly indicate that the COVID-19 pandemic had a profound impact on the use of ICT tools in higher education. The data reveals that prior to the pandemic, the adoption of digital platforms was minimal and unexplored. However, the abrupt shift to remote learning enabled the educators and learners to explore the unexplored, all because of the pandemic. The respondents emphasised that the COVID-19 pandemic made everything accessible online than before, in terms of conducting webinars, workshops, seminars, online classes and teaching and learning practices.

Overall, the COVID-19 pandemic accelerated the integration of computer gadgets and the use of online tools necessary in education. As in the case of a teacher respondent, highlighted both the benefits and drawbacks, stating, *"Yes, it has impacted. One advantage would be that its flexibility and accessibility has helped to impart education even at the comfort of our homes. The disadvantage would be its technical issues and lack of community learning experience."*

Similarly, another teacher remarked, *"Yes, it has impacted to a great extent, such as changing and shifting from the traditional method to online learning. Most importantly, integrating technology in education became more visible."* The observation highlights how the pandemic acted as a catalyst in shifting education from the conventional teaching and learning method toward an online mode.

A student respondent further narrates, *"It has become a necessity, especially with the onset of the COVID-19 pandemic. It has become relevant everywhere."* The narrative illustrates and shows how the pandemic allowed the learners to perceive the use of technology not as a supplementary tool but as a vital component in education.

IV. EXPERIENCE IN TEACHING AND LEARNING DURING THE COVID-19 PANDEMIC:

The sudden shift from offline classroom to online teaching and learning was sudden to both the teachers and students, bringing about certain challenges and opportunities for both. The experiences shared by the teachers and students seem to be mixed. The sudden shift to an online classroom setting was somewhat uncomfortable and difficult to adjust to in the beginning because of the lack of exposure to the usage of ICT tools. However, with the constant usage during the pandemic, they gained proficiency in ICT tools. Over time, the usage of ICT in online classes was met with limitations of virtual learning.

i. Initial Phase adaptation and challenge: Goudarzi., et al (2023) highlighted that the sudden transition from offline classroom to online education during the pandemic brought about certain challenges to both teachers and students who were unfamiliar with e-learning in the beginning, which led to stress and confusion. The COVID-19 Pandemic brought about a sudden shift and revolution in education that the teachers and students had to quickly adapt to the use of technology for virtual classrooms. Both educators and learners expressed concern about the use of ICT tools in the initial phase, and taking online classes for the first time was a new concept; they were unprepared, hence the challenges and reluctance in the beginning, often relying on self-learning of ICT tools. A teacher respondent narrates, *"Initially, it was a little uncomfortable to get into teaching using technology, but I got used to it and it was a great learning experience"*. More or less, they were compelled to make use of the ICT tools necessary to continue with the classes online.

Another teacher respondent states, *"Experience overall was good, because we learned a lot which we were not aware of, in terms of operating different classroom app like zoom, google meet, we were not aware of that before, than one difficult part was to reach out to the students was very difficult and especially for science students, practical was the most challenging one, other than that accessing the students, for them submitting their assignments through mail, and for us to check manually it becomes very difficult."*

Respondents stressed that during the time of the pandemic, the learning experience was fun and brought a sense of freedom in the beginning, not realising the prolonged duration of the pandemic. The respondents also highlighted how the virtual learning experience led to excessive screen time with less physical engagement. A student respondent, narrates about the experience of COVID-19 and states, *"In the beginning, it was quite fun to be free from the institution, but as time and days go by, who would have thought that the pandemic would take up so much of years and life as well."* Another student reflected on the experience and proclaimed, *"Of course, it depends from person to person, however, for me, online learning during the COVID-19 pandemic was not very effective because it involved a lot of screen time and less physical engagement."*

Overall, both educators and learners experienced the shift in education, compelling them to adapt to digital platforms despite the challenges and hardships in the process of online education. It was further revealed that, while the use of ICT tools enhanced the continuity in education, it can never replace the effectiveness of physical classroom teaching and learning.

ii. Pandemic shift and online education: Cakiroglu., et. al (2022) mention that because of the pandemic, both educators and learners witnessed the largest shift ever in education from face-to-face offline classroom to online virtual teaching and learning. They further state that most educational institutions were not in a position to bring about the unexpected shift to online education.

The pandemic served as a catalyst for digital literacy, allowing everyone to make use of and get hold of technology and develop skills necessary for education technology. Online education was significant during the time of the pandemic, a teacher respondent who was from Tamil Nadu narrates, *"Everything started from that. Online teaching was something we heard about for the first time in our lives. Personally, even I, sitting in Tamil Nadu, could impart education to the people who were in Mon, Nagaland. Although we could not get 100 per cent attention and feedback from the students, that disadvantage was there. Of course, there was connectivity, but again, I feel face-to-face teaching is more effective. And another disadvantage could be that it has made us lazy."*

Additionally, the shift to online teaching and learning made the teachers feel more passive in their role. Student respondents share similar frustrations, mentioning that the lack of initial training on online tools made learning ineffective, requiring self-exploration. Both perspectives reveal how the pandemic increased reliance on technology, exposing both students and teachers to new tools but also fostering a sense of laziness and dependency on digital platforms, which has lingered beyond the crisis. One student respondent reflected on how online tools were mostly self-taught, especially during the pandemic and narrates, *"To be honest, learning during the pandemic was not very effective, and I faced a lot of problems. When the class started online, we were not trained how to use the tools for learning, we were doing everything by ourselves, from starting to use the tools and exploring them by ourselves."* The narrative reveals the lack of preparedness in ICT usage by the institutions for their learners, placing them in a state of emotional and cognitive distress, who were made to adapt and transition without adequate guidance.

Another student respondent observed, *"And now, I think we are more exposed to the technologies. Yes, more exposed. So, another thing about being addicted to the use of technology after the pandemic, as well, or say, being more lazy after the pandemic, because we are too dependent on the use of technology."* It can be noted that despite the exposure to technology, the overreliance has reduced learners motivation and engagement.

iii. One-way communication and reduced interaction: Amer & Ouhida (2020) underscore that online learning has given fewer opportunities for students to interact and communicate with their teachers face-to-face. Goudarzi., et al (2023) further argue that the lack of proper interaction between teachers and students during the pandemic affected the quality of education. One-way communication between the teachers and students was apparent in the online classes during the pandemic, which was not satisfactory or interesting compared to that of the live face-to-face interaction between the educators and the learners. Although lessons were recorded and shared among the students. The respondents, especially the teachers, stressed the importance of face-to-face interaction, where they can know their students learning abilities through their expressions and body language. A teacher respondent narrates and states,

"It was the most difficult task of my entire teaching career. Because when you teach, you tend to look at the expression of the students, and there are certain points that they don't understand, they make certain gestures that they don't understand, or maybe sometimes the students are not organised or distracted, these are the times you are able to change your strategy. But in online classes, you are not able to see the students, you cannot feel the presence of the students, so that makes it very difficult for the teachers to teach in which direction you are going, whether they are understanding the topic well or not or whether they are getting the explanations or not."

The teacher respondent felt that the connection between the teachers and students was missing during the time of the pandemic, and was seen as less interesting to take classes online because of the lack of personal interaction, which seemed to be the preferred form of teaching and learning. Further, a teacher expressed, *"That personal communication was missing, and in teaching, that personal interaction is very important. Students will often log in and not be there."* In a traditional classroom environment, both educators and learners build bonds and connections through expressions, gestures and informal conversation, making teaching and learning more engaging and participatory. But this was not the case with the online classroom, as mentioned by the respondents, which needed deliberate effort to build connection and interaction, reducing it to a screen-based communication.

A student respondent opines, *"It was quite a new experience. Online classes indeed had a huge impact on us too in a good way. As it was my first time taking classes through online, I couldn't concentrate and I didn't learn anything."* The response shows that online learning during the pandemic was an ineffective experience for the students, with increased screen time and no physical interaction with their teachers and peers, rendering them less productive and unmotivated.

iv. Network constraint in remote learning: Tadesse & Muluye (2020) discuss that the Covid-19 pandemic affected the education system around the world, and remote learning was a way to continue with the education, however, due to the lack of poor internet access, it was a challenge.

Despite the challenges, the teachers and students acknowledged that the online learning facilitated them to connect from distant locations, making education accessible for all. The respondents reflect the unequal access

to ICT tools and internet connection, especially in rural areas, and often struggle with network issues. The digital divide was particularly evident in Nagaland, where students from rural areas faced significant challenges due to poor network connectivity and the unaffordability of devices. Many students missed out on classes entirely due to these limitations. A teacher respondent claims that,

“Teaching experience during the pandemic was so challenging because we were not in a city like Kohima and Dimapur, so in this type of place, there were a lot of network issues, and most of the students were in their villages during the lockdown, so it was so challenging for both the students and the teachers. Communicating with them was also a problem, and going to an online class was also a problem. Sometimes we were also going for personal classes following the SOPs.” When it comes to online classes, internet connectivity plays an important role as it directly affects the overall continuity of teaching and learning.

Another teacher respondent narrates, *“The disadvantage is that those students who were especially staying in remote areas hardly get a chance to even attend the class, because of the network and light. In that way, the students did not participate at the same time, otherwise, it was a good experience except for the network connection.”* The narrative reveals that a poor internet connection can disrupt learning and cause disengagement. In contrast to the physical classroom setting, where internet connection becomes less relevant, the online class seems to be drawn more towards good network connectivity.

Asianet (2025) highlight that a poor internet connection can make the teaching and learning experience frustrating while attending class through video conference. Further, Jaime (2024) argues that students find it difficult to keep up with learning due to unreliable internet connections. Student respondents record, *“There were many occasions when we had these online classes and we could not finish the classes.”*

“Experience was quite new, and it was very bad, the worst experience because of network issues.” Through the response provided, it can be noted that students were facing similar experiences as shared by the educators in connection with internet connectivity. The narrative underscores that with a bad internet connection, an online class may not take place, resulting in an unfavourable learning experience.

v. Learning Reduced: learning gap/ educational setback: Engzell., et al (2021) state that the closure of education institutions during the pandemic showed certain concern in students learning. In addition, Tadesse and Muluye (2020) mention that the students were spending less time learning and were lacking motivation to learn during the pandemic with the implementation of remote learning.

Respondents shared their experience on how learning was reduced, with less personal connection with the teachers, losing interest in the learning process, making education a mere to-do degree during the pandemic, and also how the exam and test were conducted in an open-book exam, which allowed the students to be less mentally active in their education. A student respondent details the experiences of the COVID-19 pandemic and states,

“I realise that online classes can be quite difficult because it is not the same environment as a classroom learning where students and teachers interact with each other personally. You have the feeling of wanting to learn, but the ambition to learn is much reduced, so probably that is one disadvantage of online learning. You don't have the same zeal or seriousness to actually study or give interest because you're at home and your mind is somewhere else, it can be in the kitchen, it can be in the bathroom, it can be in bed. So that interest in learning is very much reduced.” The respondent felt that when you're in a more comfortable space than the usual classroom setting, the zeal to learn fades, and the individual tends to wander off, which may suggest that human interaction plays an important role in bringing about motivation and academic interest.

The respondents highlight how the online classes and exams disrupted academic engagement. Another respondent replied, *“To be very honest, like, I did not even study for my final year, and then I'm sure like so many students went through that, and then there were online courses, we were just copying down from our PDF notes and the internet. The good thing is we got our degree, but the knowledge that we could have gotten in offline classes was missing, and that was the disadvantage.”*

The sudden transition to online education was a challenge for both parties to make use of ICT tools, and the lack of exposure was a burden in the beginning. The experiences shared by the respondents indicate how the pandemic boosted the use of digital tools in education, although not without challenges. Both believed that face-to-face interaction was missing during this period, which was another factor that demotivated both parties to be focused and honest in their work, and learning effectiveness, also in assessing the students understanding in lessons without physical interaction. The study indicates that the failure of internet connectivity was a huge burden for the teachers and students in the teaching and learning process. However, we cannot deny the fact that the pandemic was a driving force for the implementation of ICT tools in education, pointing out the need for ICT infrastructure development in education. The pandemic experience shows the need for a more inclusive and resilient system in the future.

V. STUDENTS ABILITY TO LEARN AFTER THE COVID-19 PANDEMIC

Teacher respondents have shown concern about changes in students classroom behaviour after the pandemic. Teachers mentioned that the students pose to be more distracted and less engaged in the classroom, and are becoming more reliant and dependent on their digital gadgets, especially their smartphones, and the internet shows a decline in interpersonal communication and classroom participation. A teacher respondent narrates, *"Yes, it has changed their classroom behaviour, it's different and appears to be more distracted and has become more dependent on the internet."* Another teacher proclaims, *"The learning ability of the students deteriorated after the pandemic, with all those online classroom settings and all."*

"I think their learning ability has decreased because they are so much now focused on their phone now. So, whatever we say, they want to use their phone. Nowadays, whenever we give them time for a break, they will just start using their phone instead of communicating with us or their friends." The COVID-19 pandemic was a turning point for all educators and learners to positively engage and adapt to the use of technology. But after the pandemic, the narrative highlights how the students were more drawn towards their gadgets rather than being engaged with their teachers or peers.

The teachers have also shown concern as to how the students have easy access to ready-made materials online, which, on the other hand, contributes to the growing laziness and reduces curiosity among the students. A teacher respondent states, *"It has somehow made the students lazy and decreased their enthusiasm to discover themselves and learn. Students have developed the habit of searching for online educational resources"*.

Another teacher claims, *"The students have become very lazy because, especially in terms of exams, it's easier for the students to secure marks since it was an online thing. The real feeling of the classroom is not there. They take their studies more lightly, and the presence of the teacher is not felt, so all of these factors made them lazier."*

There is no doubt that ICT has transformed the learning experience of both teachers and students. Students have now adapted to the ability to find resources online quickly and efficiently, enabling them to be self-reliant with the help of technology. The pandemic has created a space and provided a wider range of resources for both teachers and students than ever before. A teacher respondent narrates, *"Students' ability to learn after the pandemic- the students also started giving more importance to the internet, so they started using the internet more to find their materials."*

The teachers have also raised concerns that there has been a noticeable decline in students writing skills after the pandemic. This has been due to the students being accustomed to digital platforms and reading materials on screen, ignoring the practical writing by hand during the time of the pandemic. A teacher respondent notes;

"I think almost all the students are addicted to ICT, they cannot live without ICT. They can live in the absence of some other things, but they cannot live in the absence of their phones. So, this has really somehow transformed or brought about changes from the traditional way of dependency on learning to the modern days, forget about the school kids, the nursery kids can handle smartphones better than their parents. This ICT is becoming like the master. We are letting the technology write for us/ think for us, or do almost everything for us. Since the pandemic, using ICT effectively, students learning capacity has increased. Though the students learning capacity has increased through ICT, the output has decreased, although the input has increased. Because when we say learning may be good, when we ask them to write a paper, their performance is not up to the expectation of what they are learning."

Similarly, in the case of another teacher, the respondent reveals, *"The learning ability of the students after the pandemic, they forgot how to write, although it has been normalised now. Even as small as that was affected. And by using mobile phone for reading during the exam, I think the skill of writing has really gone down."* The teacher's narrative shows that the COVID-19 pandemic disrupted even basic academic skills such as writing. The statements provided by the teachers indicate deterioration in their skills due to the overreliance on computer gadgets during and after the pandemic. It can be noted that the pandemic reshaped students learning, and while ICT expanded access to knowledge, gaps in learning were apparent once the students returned to offline classrooms.

The educators have also highlighted the inconsistency in securing grades between online and offline assessments. The teacher respondents state that the students grades were generally higher during the pandemic, but since returning to offline classes after the pandemic, they can see a drop in students grades. The rise and fall of grades of the students during and after the pandemic shows that the easy availability of materials and reduced control during online exams might have contributed to inflated grades, showing rather concealed gaps in knowledge. A teacher responded, *"During the pandemic, if you look at their grades and in terms of present time, it was much higher, but in terms of offline exams and grades, it has decreased as compared. That issue is always there."* In continuation, another teacher proclaims, *"The learning ability of the students deteriorated after the pandemic with all those online classroom settings and all."*

The study data clearly indicates that a significant transformation took place in students learning ability and behaviour after the COVID-19 pandemic. The data highlights how there has been a shift towards the students

ability to learn after the pandemic, in terms of being often distracted and less engaged, being more reliant on online resources with the help of the internet, growing laziness, and a decrease in writing skills and academic grades after the COVID-19 pandemic. The study suggests that while ICT tools provide valuable opportunities for education, overdependence on these tools can adversely affect learners motivation, curiosity and overall academic performance.

VI. DISCUSSION AND CONCLUSION

The COVID-19 Pandemic transformed the entire system of education in Nagaland, especially in the realm of higher education, while the usage of ICT tools has become a central part of teaching and learning. The COVID-19 pandemic acted as a mechanism and accelerated the adoption and integration of ICT tools by educators and learners. Pre-COVID-19 pandemic, the usage of ICT tools was unexplored and limited set up in academics. But the pandemic brought sudden change and transition in bringing about the online learning platforms such as Zoom, Google Classroom, Google Meet, WhatsApp, and other online resources, which were previously unfamiliar or underutilised in Nagaland.

The study article discussed the experience shared by the respondents during the pandemic, shows the limitations that they have faced in terms of digital infrastructure in education. The initial phase of using tools during the pandemic was a challenge since they were unprepared for the sudden shift, and most respondents stressed that online tools were mostly self-taught despite the training provided. The evidence of one-way communication between the teachers and students was apparent during the online classes, which was a challenge for both, stressing the importance and need for face-to-face interaction and communication, without which the students felt that learning was much reduced, and loss of interest and on top of that, the uncertain and unreliable internet connection was a problem. However, it is certain that the respondents, despite all the experience shared, felt that the COVID-19 pandemic has allowed them to hold onto technology and become more skilled in using ICT tools necessary for education.

The study further reveals that the ability of the students to learn became less engaged, distracted, reduced curiosity, and growing laziness, a decline in writing skills and a decline in students grades with the over-reliance and dependence on technology after the pandemic. However, there is without doubt that technology has equally benefited all parties and has also brought about change in the learning ability and academic performance of the students. Experiencing both the offline and online classroom settings, the respondents feel that the traditional classroom setting with ICT tools seems to be the best approach in teaching and learning for both educators and learners.

Overall, the study underscores that the pandemic was unplanned but was considered an effective catalyst for digital literacy, enabling both teachers and students to be more competent in ICT usage and adapt to the change brought about by the COVID-19 pandemic in the integration of technology in education. Further, the study strongly points out a positive long-term shift towards technology-driven education. Although the use of technology (ICT) was prominent in Nagaland, it was minimal in its approach. The COVID-19 Pandemic influenced Nagaland's higher education to more development and growth in implementing ICT tools in education.

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